

REPLACEMENT ABSTRACT

The method and apparatus feature detecting an interrupt service request; inserting interrupt servicing instructions responsive to the interrupt service request into an instruction queue mechanism in such manner that the inserted interrupt servicing instructions intervene mainline program instructions within a queue mechanism thereby allocating core processor bandwidth between the inserted interrupt servicing instructions and the mainline program instructions; and processing the instructions within the instruction queue mechanism including the mainline program instructions and the inserted interrupt servicing instructions. By doing so, core processor bandwidth allocation between the mainline program instructions and the inserted interrupt servicing instructions is achieved by concurrent in-line staging of the same within the instruction queue mechanism.